



“State of the State” of Water in Idaho

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Regional Manager/Watermaster WD01

Idaho Department of Water Resources

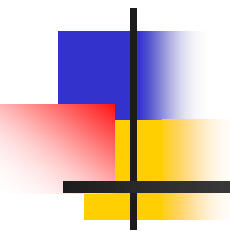
June 12, 2008





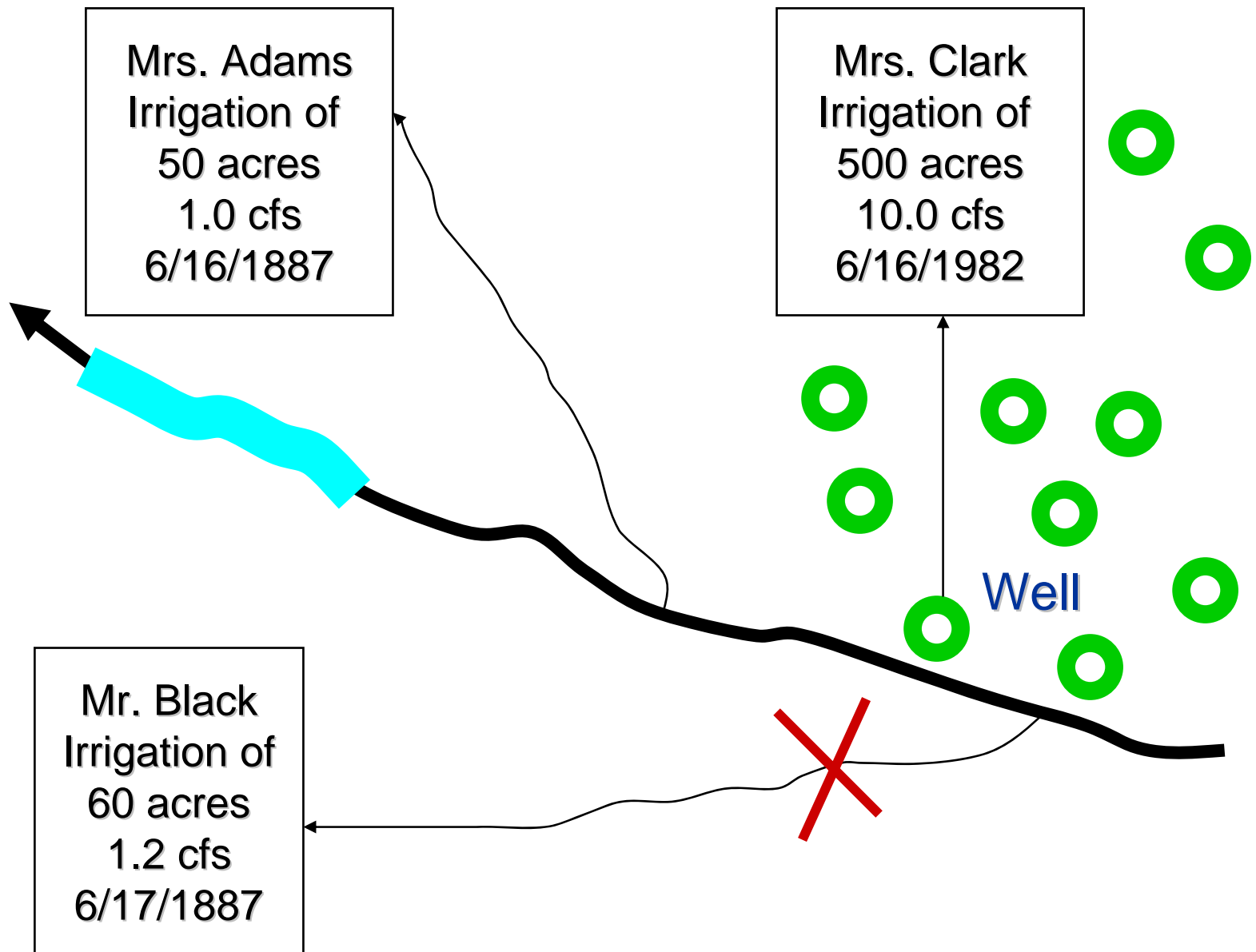
Discussion Items

- Background Concepts
- Problem
- Status
- Some Solutions
- Approach
- Questions



In Idaho, the appropriation doctrine is used for the delivery both surface water rights and ground water rights—

“first in time is first in right”



cfs = cubic feet per second



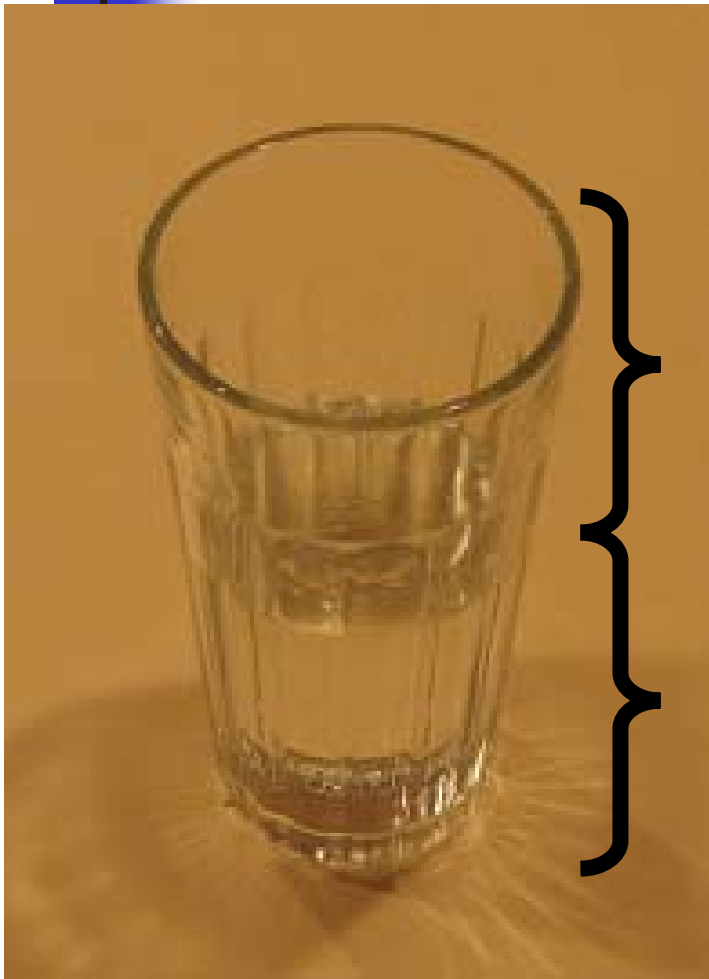
Problem

The adequacy of Idaho's
water supply infrastructure is
diminishing

Water Supply in Idaho – Mid Twentieth Century



Water Supply in Idaho – Early Twenty-first Century



$\frac{1}{2}$ Empty?

$\frac{1}{2}$ Full?

» **20th Century Needs**

» **Endangered Species Requirements**

» **Increased Urbanization**

» **Ground water mitigation**

» **Climate change**

Hypothesis

In the 21st Century adequate water
will be made available for
municipal uses

Corollary

Conservation and management are important, but will not be sufficient to meet future needs.

If adequate water is to be made available for **sustainable economies**, additional sources must be created.

Water Supply in Idaho – Early Twenty-first Century



A proposal...

... Let's get
to work!



Some Solution Options

On very rare occasions...

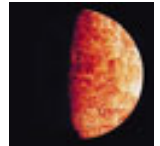
...the planets are aligned

- Engagement of all branches of Govt
 - Legislative
 - Judicial
 - Executive
 - Idaho Water Resource Board
 - Local Government
- Engagement of water users
 - Growers
 - Environmentalists
- Engagement of the public
- Drought
- Growing recognition of climate change

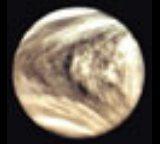
The Sun



Mercury



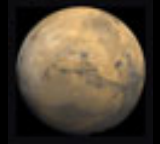
Venus



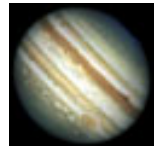
Earth



Mars



Jupiter

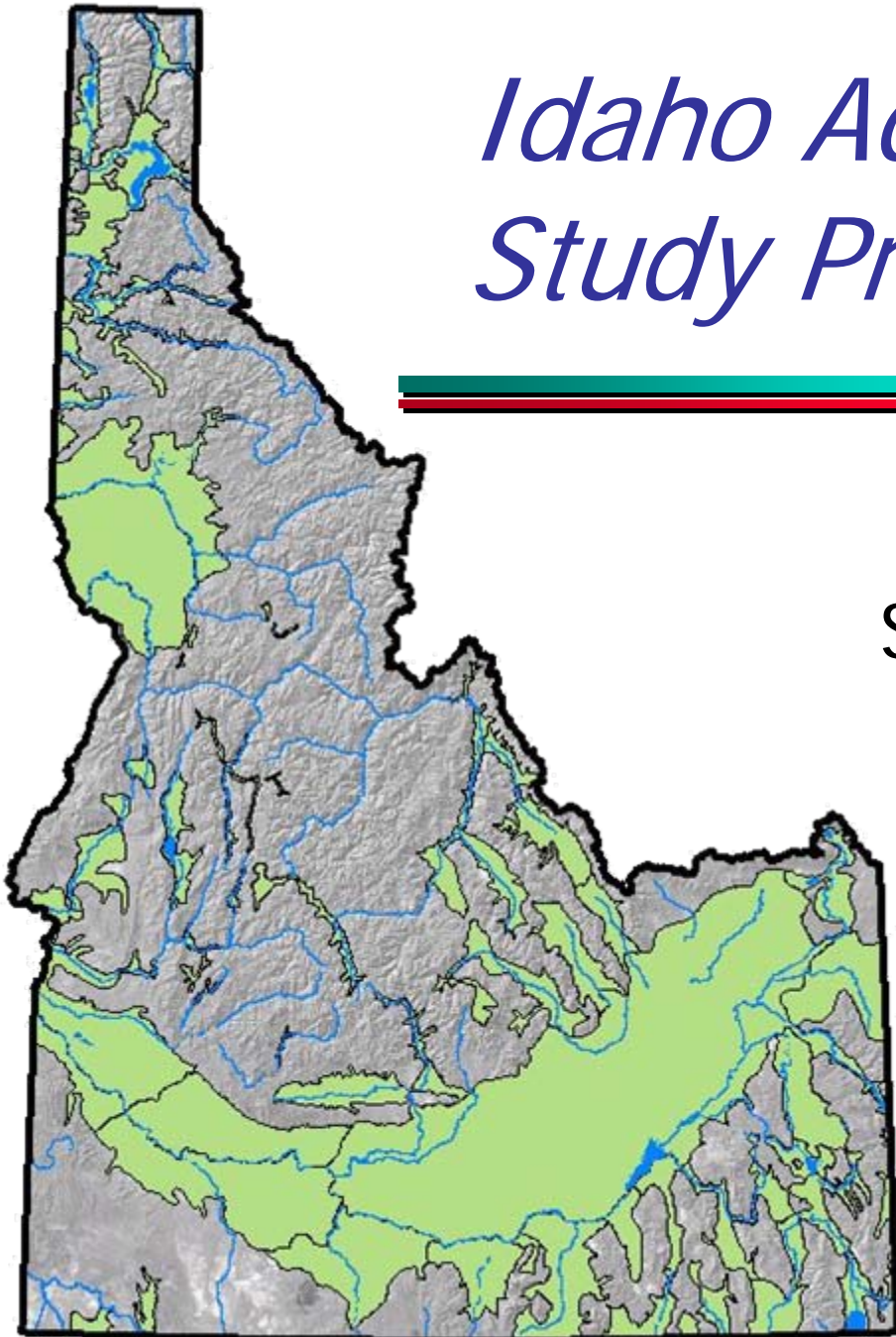


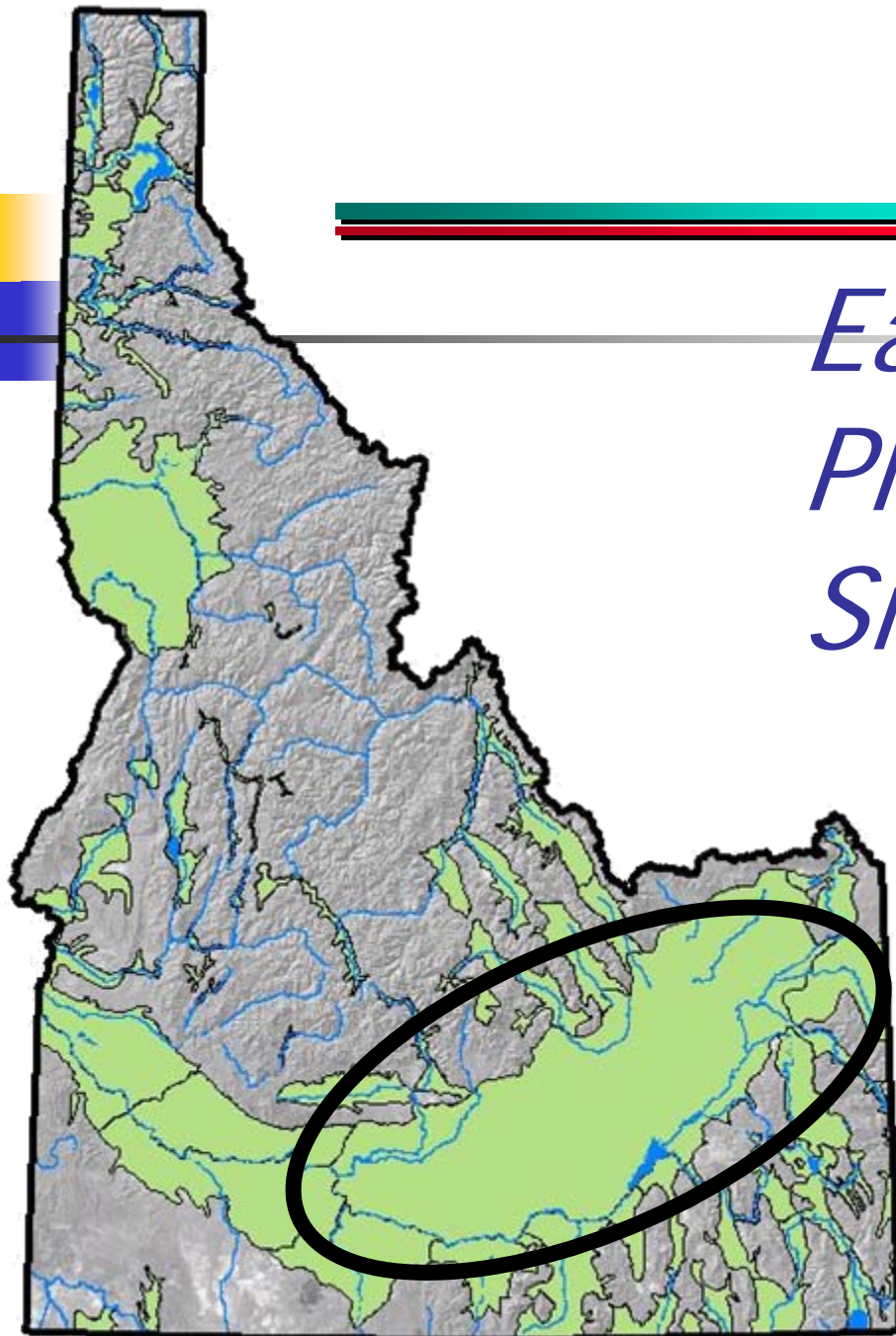
Saturn



Idaho Aquifer Study Proposal







\$20M Appropriated

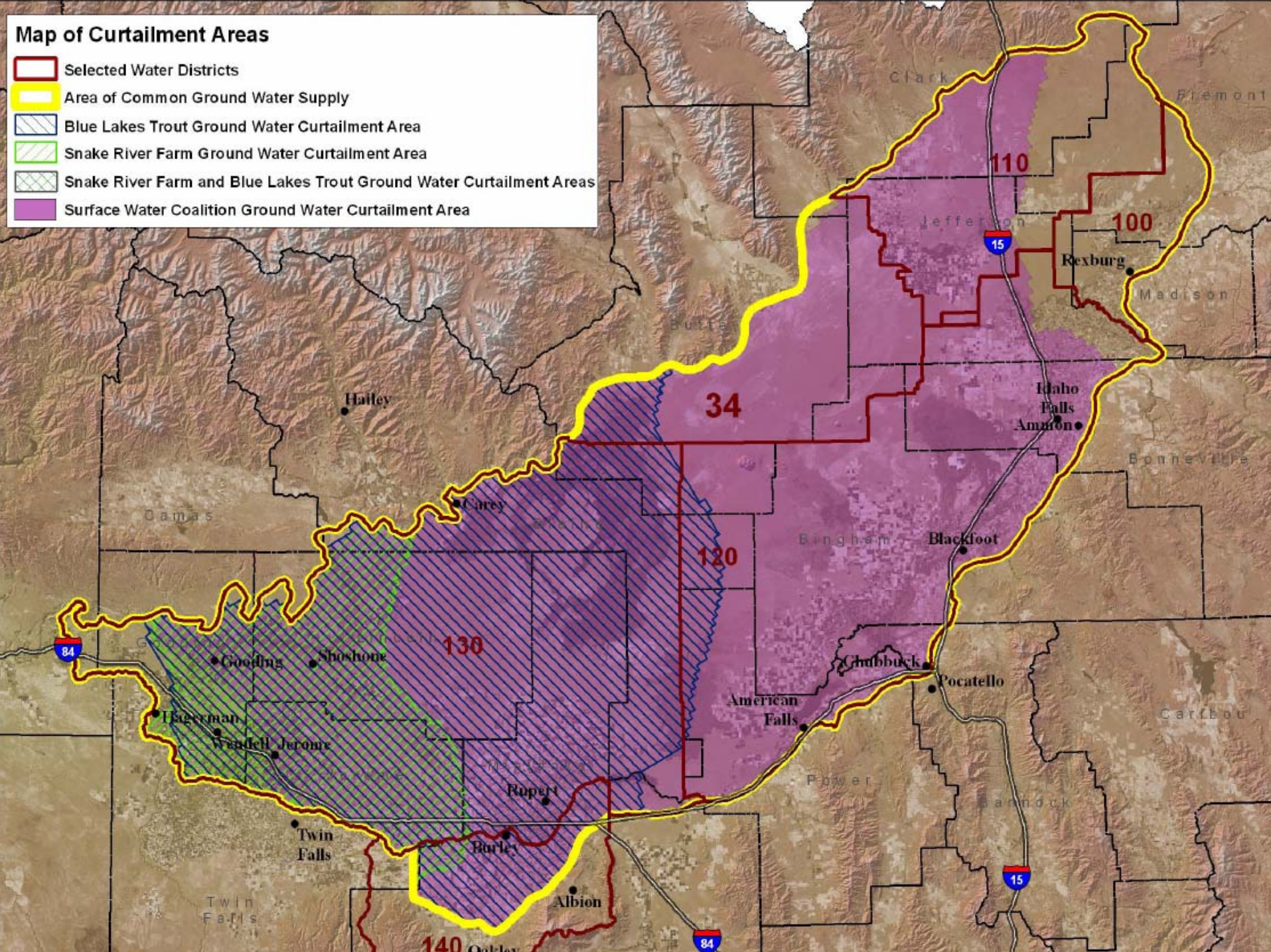




Eastern Snake Plain Aquifer Situation

Map of Curtailment Areas

-  Selected Water Districts
-  Area of Common Ground Water Supply
-  Blue Lakes Trout Ground Water Curtailment Area
-  Snake River Farm Ground Water Curtailment Area
-  Snake River Farm and Blue Lakes Trout Ground Water Curtailment Areas
-  Surface Water Coalition Ground Water Curtailment Area



Thousand Springs

- Snake River Farm
- Blue Lakes

Hearing held Nov 28 – Dec 13.

Hearing Officer Reconsidered Order issued – Subject to Responses prior to IDWR review.

Springs to GW calls.

Challis

Clayton

A&B Irrigation District

Call Denied on Jan 29.

Request for hearing received Feb 13.

Hearing re-set for Dec 8.

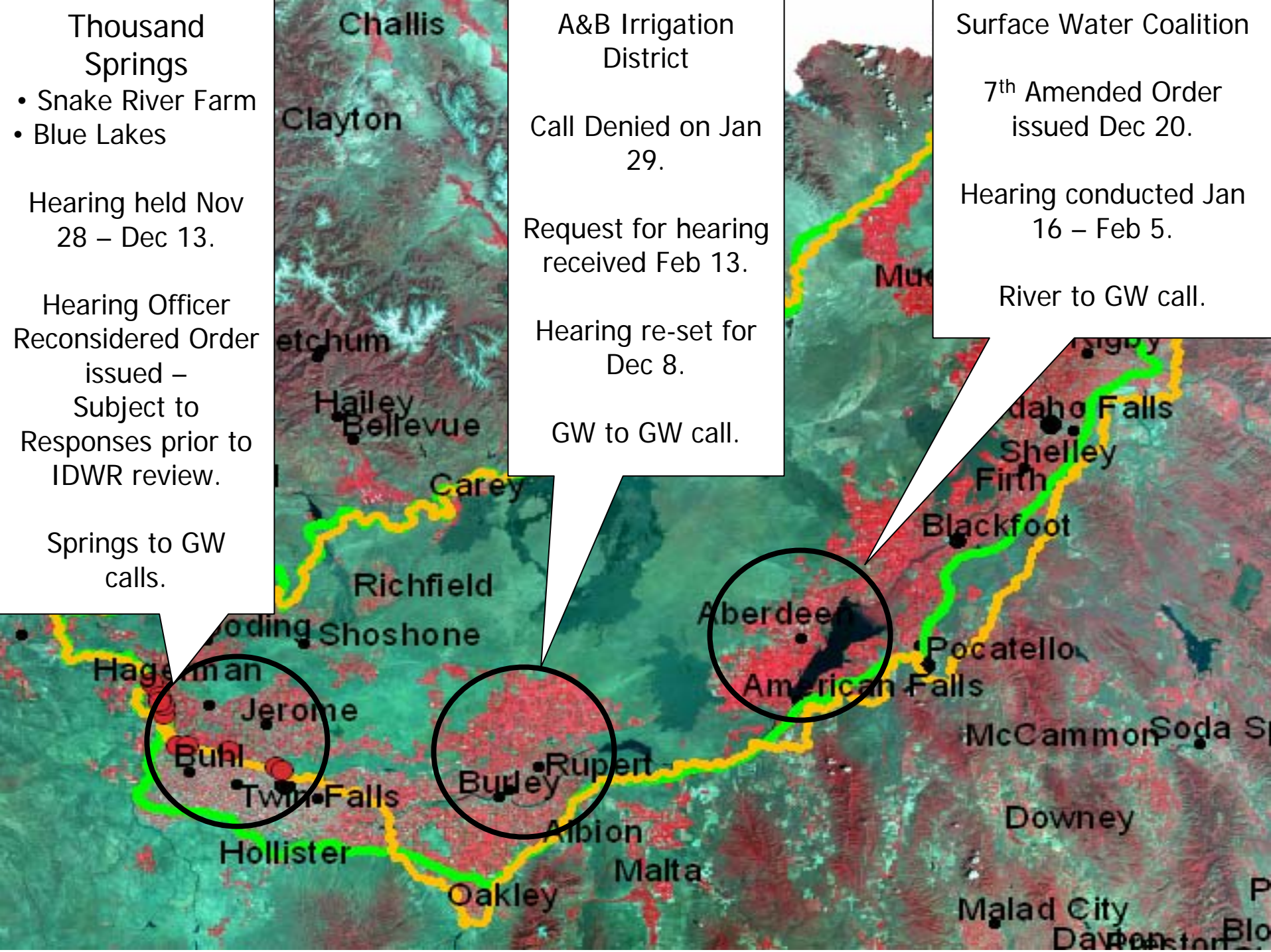
GW to GW call.

Surface Water Coalition

7th Amended Order issued Dec 20.

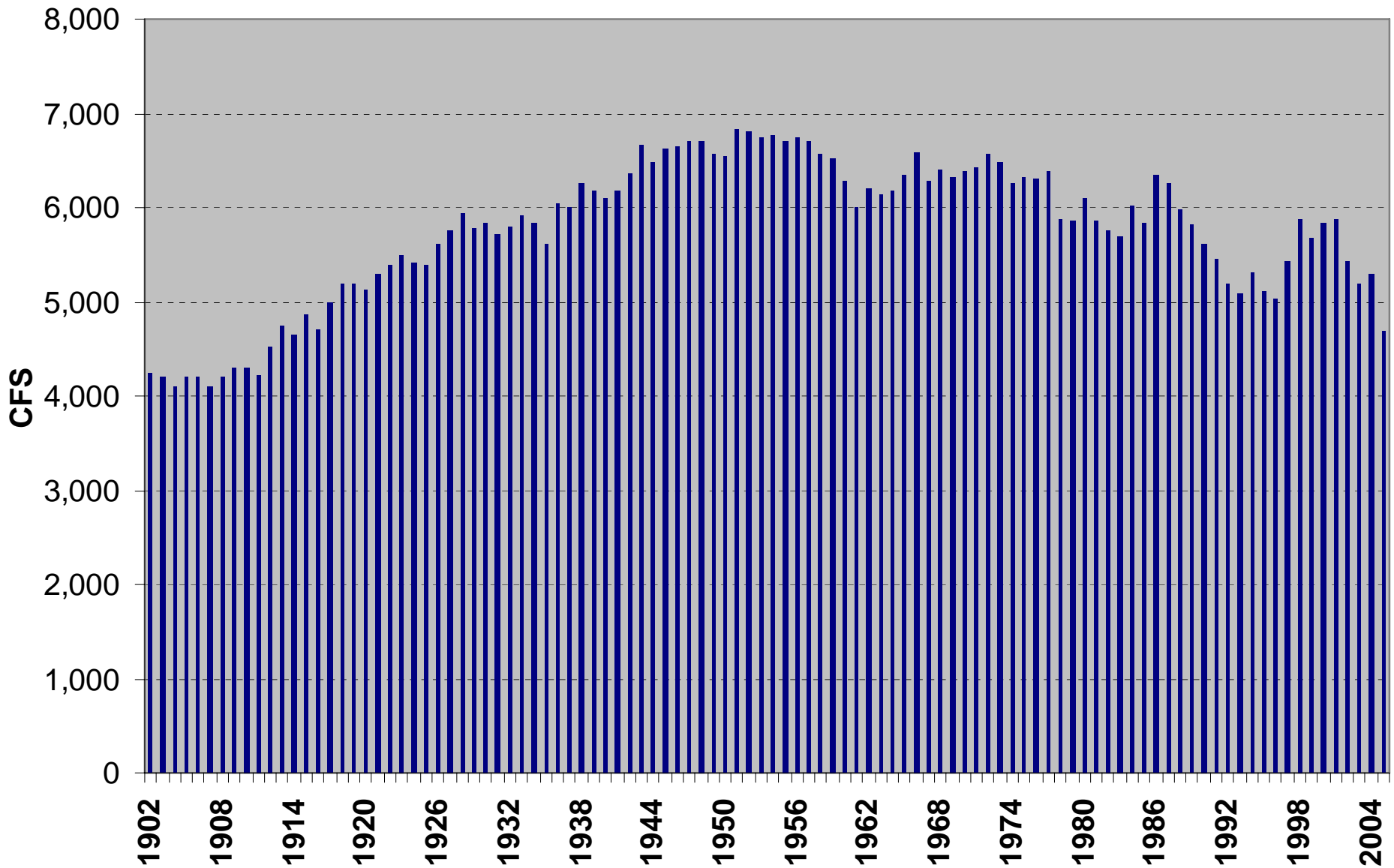
Hearing conducted Jan 16 – Feb 5.

River to GW call.



AVERAGE ANNUAL SPRING DISCHARGE TO SNAKE RIVER BETWEEN MILNER AND KING HILL

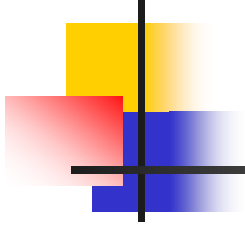
1902-2005





Aquifer Study Locations

Basin Name
ESPA
Lower Boise/Treasure Valley
Spokane Valley-Rathdrum Prairie
Moscow-Pullman
Big Wood
Mountain Home
Bear
Teton
Big Lost
Portneuf
Blackfoot



Idaho Storage Capacity



Storage Capacity in Idaho Compared to the Missouri Basin

- Missouri Basin:
 - Average annual discharge
 - 18 MAF
 - Basin Storage Capacity:
 - 73 MAF
 - $73/18 \sim 4$
- Missouri Basin can store 4 times the annual discharge volume



Idaho Storage Capacity

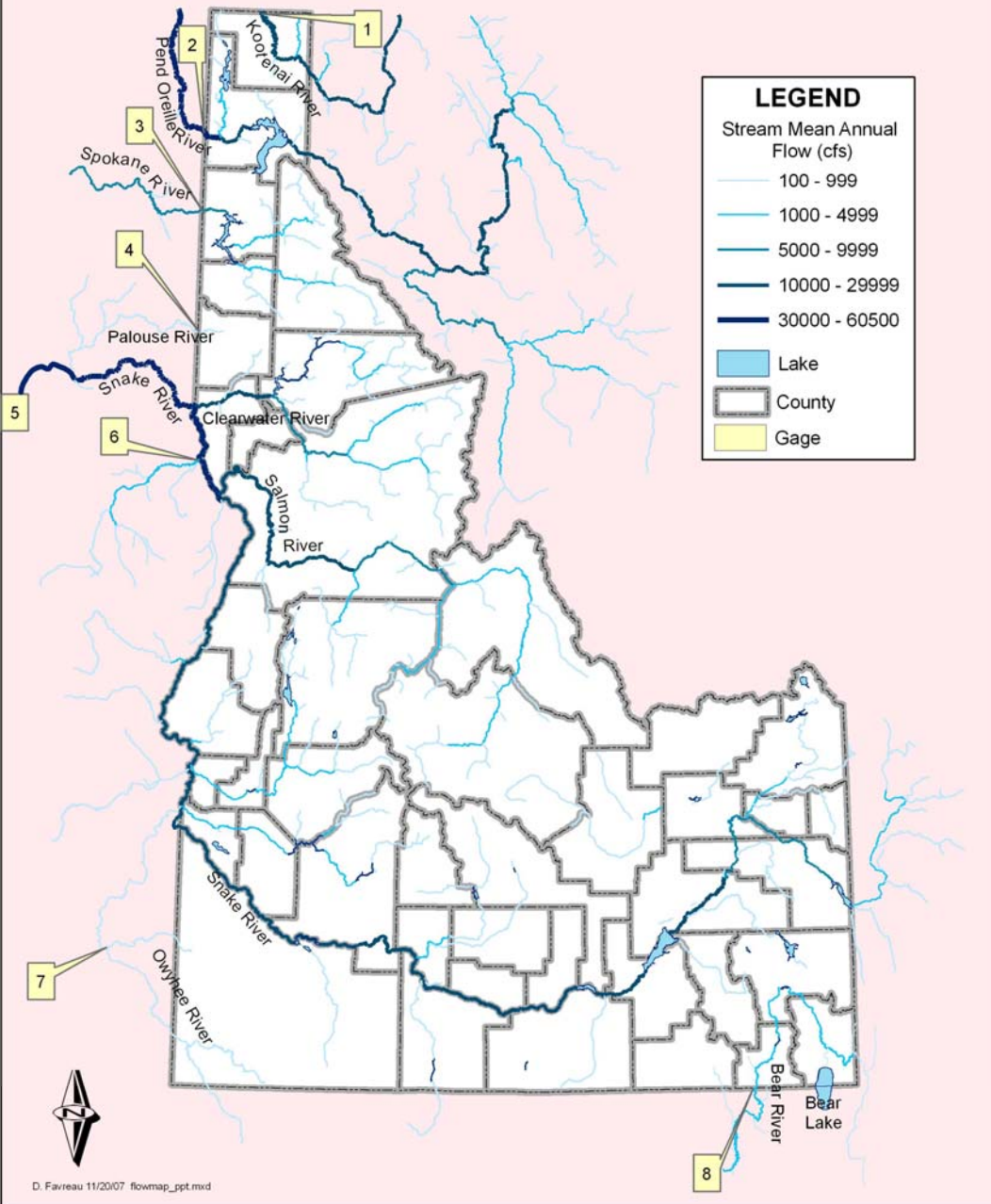
- Snake River at King Hill:

- Average annual discharge: 7 MAF
- Basin Storage Capacity: 4 MAF
- $4/7 \sim 0.6$

- Boise River at Parma:

- Average annual discharge: 9 MAF
- Basin Storage Capacity: 1 MAF
- $1/9 \sim 1.1$

Ave. Water Year Vol. Flowing From ID



Gage

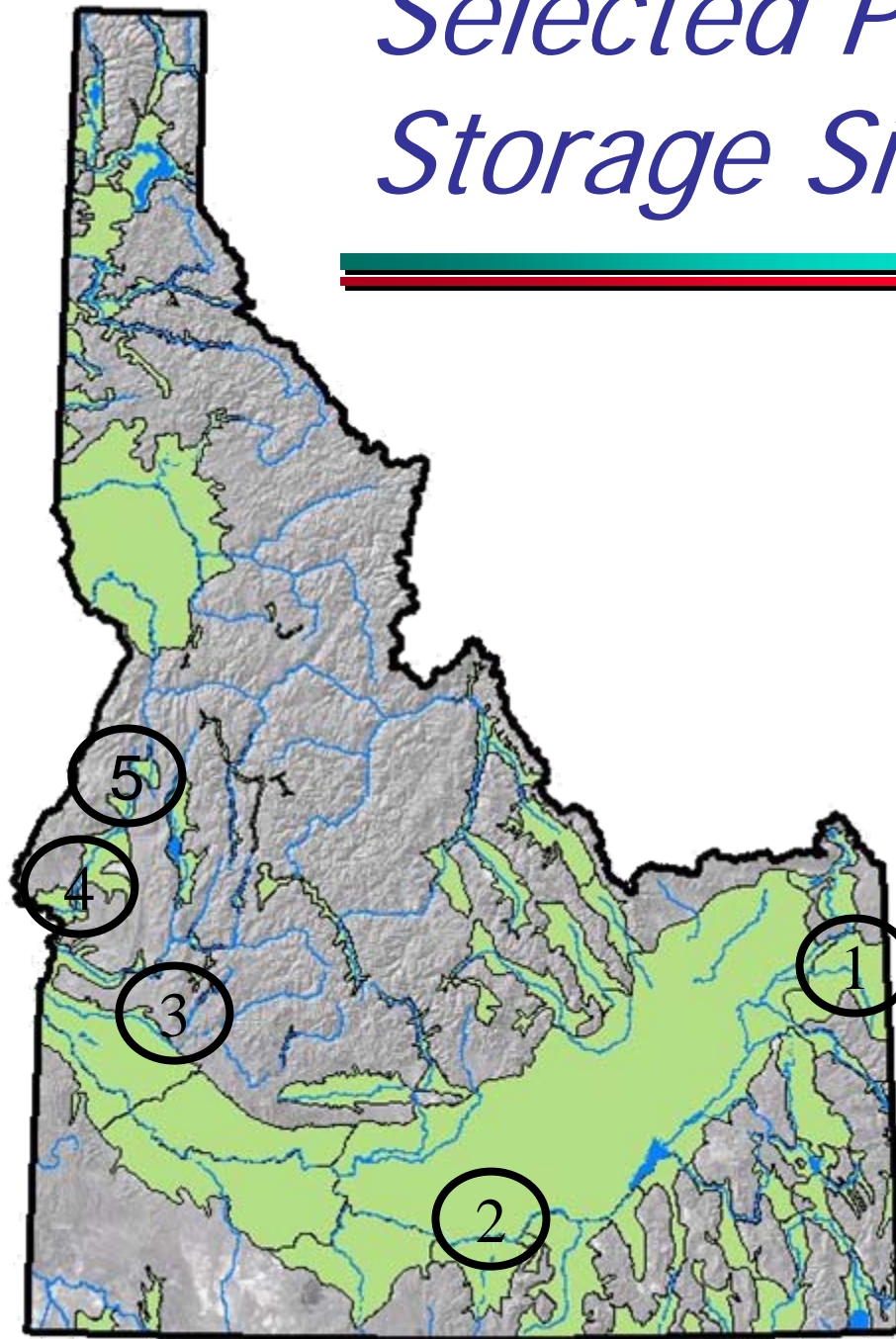
1. Near Porthill, ID
11,153,000 AF
2. Albeni Falls Dam
17,633,000 AF
3. Near Post Falls, ID
4,475,000 AF
4. Near Potlach, ID
190,000 AF
5. Lower Granite Dam
34,850,725 AF
6. Near Anatone, WA
25,281,000 AF
7. Near Rome, OR
686,000 AF
8. ID-UT State Line
770,000 AF



House Joint Memorial 008

RESOURCES AND CONSERVATION WATER STORAGE PROJECTS - Stating findings of the Legislature and supporting a study of additional water storage projects in the state of Idaho and encouraging the Bureau of Reclamation, the United States Army Corps of Engineers, the Governor of the State of Idaho, the Idaho Water Resource Board, the Idaho Department of Water Resources, and other federal, state and local agencies to cooperate with the residents of the state of Idaho in initiating and completing the study of additional water storage projects including, but not necessarily limited to, the Minidoka Dam enlargement, Teton Dam replacement and Twin Springs Dam, identifying those projects that are feasible, and moving forward with implementation and construction of those water projects that most benefit the residents of the state of Idaho.

Selected Potential Surface Storage Sites



1. Teton Dam
2. Minidoka Dam
3. Twin Springs Dam
4. Galloway Dam
5. Lost Valley Dam

\$1.8M Appropriated



WASTING MONEY

Apr 23, 2008 - Letter-to-the-editor - IDAHO FALLS POST REGISTER

The 2008 Idaho Legislature overall could have done better. Much better. But one of the dumbest things they did was pass a measure which allocates \$400,000 for a study of possibly rebuilding the Teton Dam.

We've already seen two major failures involving the Teton Dam. The first was a failure of government in that this water-welfare boondoggle was ever built at all. It was the "iron triangle" at work -- an organized special interest (irrigators seeking more subsidized water), the politicians who serve the interest (the Idaho delegation); and the bureaucracy eager to serve both parties (Bureau of Reclamation, whose phony benefit-cost calculations and inadequate environmental impact statement did the agency little credit). The second failure was the more obvious one -- the Teton Dam broke on June 5, 1976.

These entities have already been responsible for devastating the beautiful Teton River Canyon once. The river and canyon are still recovering, and the Idaho legislators don't seem to have noticed what happened the first time.

Even if legislators knew nothing about the Teton River nor cared for its natural values, they should at least have known about the fractured rhyolite forming the north side of the canyon, and that this is not a safe site for a dam.

JERRY JAYNE

Idaho Falls



Solutions being Developed by the Comprehensive Aquifer Management Plan Advisory Committee

- Funded by the Idaho Legislature
- Report due to the Idaho Water Resource Board, December 2008
- Comprised of Broad Representation
 - Water users
 - Municipalities
 - Counties
 - Environmentalists
 - Developers
 - Domestic Users
 - Agencies

Teton Lake / Badger Lake System

By Neal Wickham 1/20/2008



**Rendering of Teton Lake in Fremont County, Idaho
View to Southeast Towards Teton Range**

Rendering of Teton Lake and Badger Lake

○ = 5 .





Galloway Project

- Feasibility Study in 1989
- Technical Specifications:
 - 300-foot high
 - 900,000 acre-foot maximum storage capacity
- Estimated cost: \$350 million, current dollars
- Uses: Flow Augmentation, Flood control, Irrigation, Recreation, Hydropower

Minidoka Dam Raise

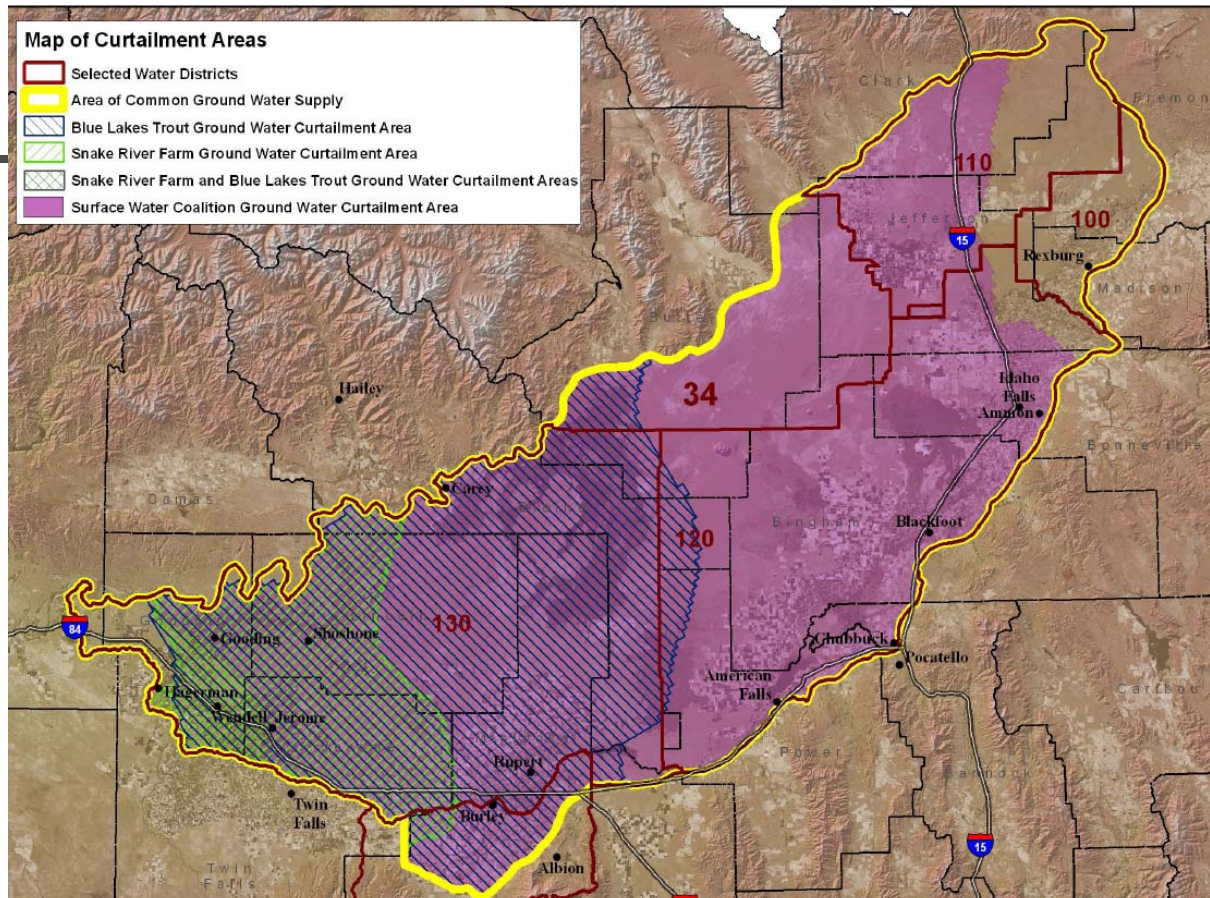




Minidoka Dam Raise

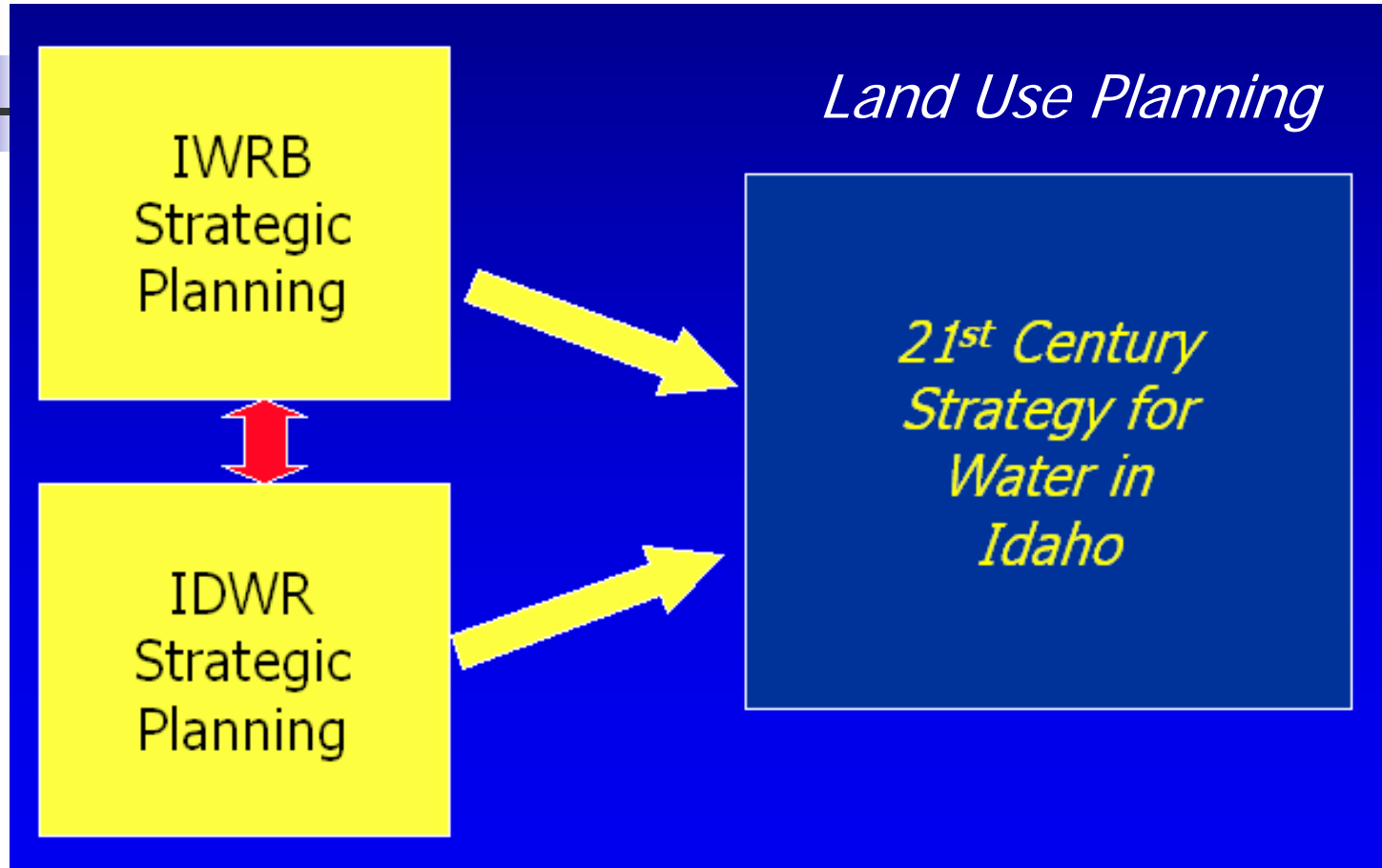
- Proposal to add four to five feet to dam height during dam rehabilitation
- Result in increase of 40,000-50,000 acre-foot storage capacity
- Estimated cost: \$100-300 million, current dollars (feasibility study underway)

Approach



1. Continue to administer surface and ground water jointly (conjunctively)

Approach (cont.)

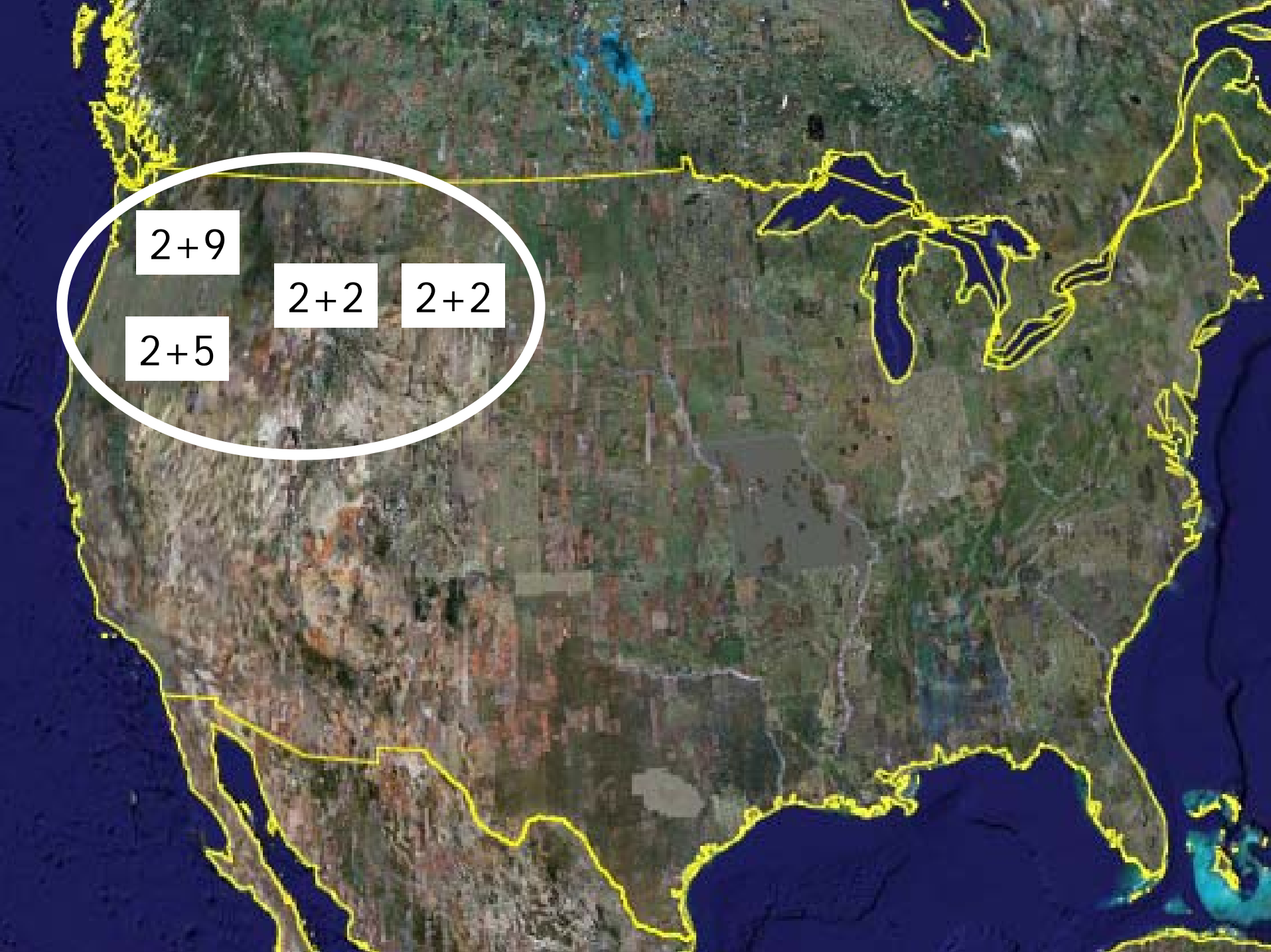


2. Devote significant energy to planning for future needs

Approach (cont.)



3. Work jointly with Northwest states for storage project planning

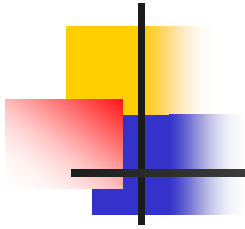


$2+9$

$2+5$

$2+2$

$2+2$



Questions ?